

Application Serial No. 10/666,530
Reply to Office Action of November 7, 2005
Amendment dated February 7, 2006

Amendments to the Claims

This Listing of Claims will replace all prior versions, and listings, of claims in the application.

Listing of claims

Claim 1 (Currently amended) Method for determining whether a substance is a modulator of a target component in a cell, comprising the steps of:

- (a) preparing a cell, which contains the target component, wherein the cell is immobilized on an extracellular potential-sensitive electrode,
- (b) bringing a substance to be tested in contact with the cell, in a medium which has a salt concentration of $\leq 100 \text{ mmol/L}$,
- (c) measuring a signal at the electrode due to the target component, and
- (d) determining the effect of the substance to be tested on the measurement signal.

Claim 2 (Original) Method according to Claim 1 for determining whether a substance is a modulator of a membrane-associated target component.

Claim 3 (Previously presented) Method according to Claim 1 for determining whether a substance is a modulator of an ion-channel/receptor system.

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Claim 4 (Original) Method according to Claim 3, characterized in that the ion-channel/receptor system contains a voltage-controlled, ligand-controlled or mechanically controlled ion channel.

Claim 5 (Original) Method according to Claim 4, characterized in that the ion channel is a potassium channel.

Claim 6 (Original) Method according to Claim 5, characterized in that the potassium channel is selected from hSlo and KV1.3.

Claim 7 (Previously presented) Method according to Claim 3, characterized in that the ion-channel/receptor system contains an NMDA, GABA, AMPA or acetylcholine receptor.

Claim 8 (Previously presented) Method according to Claim 1, furthermore comprising stimulation of the target component in the cell.

Claim 9 (Original) Method according to Claim 8, characterized in that the stimulation of the target component comprises electrical, optical or/and chemical stimulation.

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Claim 10 (Original) Method according to Claim 9, characterized in that the stimulation of the target component comprises the application of a DC voltage or an AC voltage.

Claim 11 (Currently amended) Method according to Claim 1, characterized in that the cell is in contact with an additional electrode, ~~for example a patch clamp~~.

Claim 12 (Previously presented) Method according to Claim 1, characterized in that the potential-sensitive extracellular electrode is arranged on a chip.

Claim 13 (Previously presented) Method according to Claim 1, characterized in that an array comprising a multiplicity of cells immobilized on different electrodes is prepared, and a multiplicity of substances are tested.

Claims 14-22 (Canceled)

Claim 23 (New) The method of claim 11, wherein the additional electrode is a patch clamp.